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FACSIMILE TRANSMISSION

DATE: AUGUST 19, 2008 PAGE 1 OF: 32

TO: USPTO FACSIMILE NO.: (571) 273-8300

FROM: GARY P. OAKESON TRANSMITTED BY: BRENDA WISEMAN

OUR DOCKET NO.: 200309260-1

FOR: INK-JET PRINTING SYSTEM WITH REDUCED NOZZLE CLOGGING

SUBJECT: APPEAL BRIEF

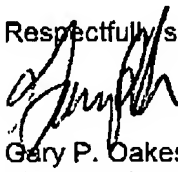
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

Dear Sir/Madam:

Attached please find an Appeal Brief for Docket No. 200309260-1, Application No. 10/825,736.

Thank you. We await your confirmation of receipt.

Respectfully submitted,



Gary P. Oakeson
THORPE NORTH & WESTERN, LLP
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Reg. No. 44266

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400

PATENT APPLICATION

ATTORNEY DOCKET NO. 200309260-1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Paul Bruinsma

Confirmation No.: 8822

Application No.: 10/825,736

Examiner: Laura E. Martin

Filing Date: 04/15/2004

Group Art Unit: 2853

Title: Ink-Jet Printing System With Reduced Nozzle Clogging

Mail Stop Appeal Brief-Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on July 7, 2008.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) $500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:

☐ 1st Month $120	☐ 2nd Month $450	☐ 3rd Month $1020	☐ 4th Month $1590

☐ The extension fee has already been filed in this application.

☒ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of $ 500. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.

☒ A duplicate copy of this transmittal letter is enclosed.

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☒ I hereby certify that this paper is being transmitted to the Patent and Trademark Office facsimile number (571)273-8300.
Date of facsimile: 08/19/2008
Typed Name: Brenda Wiseman
Signature: Brenda Wiseman

Respectfully submitted,
Paul Bruinsma
By _____
Gary P. Oakeson
Attorney/Agent for Applicant(s)
Reg No.: 44266
Date: 08/19/2008
Telephone: (801) 566-6633

Rev 10/08u (AplBrief)

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400

PATENT APPLICATION

ATTORNEY DOCKET NO. 200309260-1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Paul Bruinsma

Confirmation No.: 8822

Application No.: 10/825,736

Examiner: Laura E. Martin

Filing Date: 04/15/2004

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Mail Stop Appeal Brief-Patents
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PO Box 1450
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Date of facsimile: 08/19/2008
Typed Name: Brenda Wiseman
Signature: Brenda Wiseman

Respectfully submitted,
Paul Bruinsma
By _____
Gary P. Oakeson
Attorney/Agent for Applicant(s)
Reg No.: 44266
Date: 08/19/2008
Telephone: (801) 566-6633

Rev 10/05a (ApBrief)

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APPEAL BRIEF
DOCKET NO. 200309260-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ART UNIT: 2853 EXAMINER: Laura E. Martin FIRST NAMED INVENTOR: Paul Bruinsma SERIAL NO.: 10/825,736 FILED: 4/15/2004 CONF. NO.: 8822 FOR: INK-JET PRINTING SYSTEM WITH REDUCED NOZZLE CLOGGING DOCKET NO.: 200309260-1	**CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8** DATE OF DEPOSIT: 08/19/2008 I hereby certify that this paper or fee (along with any paper or fee referred to as being attached or enclosed) is being submitted on the date indicated above via: ☐ EFS Web ☒ facsimile to 571-273-8300 ☐ the United States Postal Service with sufficient postage as first class mail addressed to: Mail Stop _____, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. Brenda Wiseman Brenda Wiseman

APPELLANTS' APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
Mail Stop Appeal Brief – Patents

Dear Sir:

Appellants submit this appeal brief in connection with their appeal from the final rejection of the Patent Office, mailed March 6, 2008, and in connection with the Advisory Action, mailed June 16, 2008, for the above-identified application. A Notice of Appeal was filed on July 7, 2008.

08/20/2008 HMARZI1 00000005 082025 10825736
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I. REAL PARTY IN INTEREST

The real party in interest is Hewlett-Packard Development Company, LP, a limited partnership established under the laws of the State of Texas and having a principal place of business at 20555 S.H. 249 Houston, TX 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware Corporation, headquartered in Palo Alto, CA. The general or managing partner of HPDC is HPQ Holdings, LLC.

II. RELATED APPEALS AND INTERFERENCES

Appellants and Appellants' legal representatives know of no other appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-7, 9-22, and 24-30 remain pending. Claims 8 and 23 have been canceled. Thus, the claims on appeal in this application are claims 1-7, 9-22, and 24-30, which constitute all of the claims presently pending for consideration.

IV. STATUS OF AMENDMENTS

No amendments to pending claims 1-7, 9-22, and 24-30 have been made since the office action mailed on March 6, 2008, which was the final rejection of the pending claims.

V. SUMMARY OF CLAIMED SUBJECT MATTER

1. A fluid dispensing system for ink-jet printing, (p. 2, ln. 15-25; p. 6, ln. 25 – p. 2, ln. 5; generally p. 6, ln. 25 – p. 20, ln. 7) comprising:

(a) an ink-jet ink including from 0.1 wt% to 6 wt% anionic dye colorant and from 0.05 wt% to 1.0 wt% of an anionic dispersant polymer, (p. 2, ln. 19-21; p. 6, ln. 25-27; p. 10, ln. 14 -- p. 12, ln. 10) and

(b) a fixer composition including a cationic crashing agent that is reactive with a component of the ink-jet ink (p. 2, ln. 21; p. 6, ln. 25-29),

said fluid dispensing system configured for overprinting or underprinting the fixer composition with respect to the ink-jet ink (p. 2, ln. 22-25; p. 4, ln. 23 – p. 5, ln. 20; p. 6, ln. 29-32; p. 12, ln. 13-17).

16. A method of ink-jet imaging (p. 2, ln. 26-32; p. 7, ln. 6-16; generally p. 6, ln. 25 – p. 20, ln. 7), comprising:

(a) jetting an ink-jet ink from ink-jet printing nozzles, said ink-jet ink including from 0.1 wt% to 6 wt% of an anionic dye colorant and from 0.05 wt% to 1.0 wt% of an anionic dispersant polymer, (p. 2, ln. 26-32; p. 7, ln. 6-16; p. 10, ln. 14 – p. 12, ln. 10) and

(b) jetting a fixer composition from fixer printing nozzles, wherein the fixer composition is overprinted or underprinted with respect to the ink-jet ink, said fixer composition including a cationic crashing agent reactive with a component of the ink-jet ink (p. 2, ln. 27-32; p. 4, ln. 23 -- p. 5, ln. 20; p. 7, ln. 7-13; p. 12, ln. 13-17).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issue presented for review is: (1) whether claims 1-3, 5-7, 9-18, 20-22, and 24-30 are unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 5,958,121 (hereinafter "Lin") in view of U.S. Patent No. 5,624,484 (hereinafter "Takahashi"); and (2) whether claims 4 and 19 are unpatentable under 35 U.S.C. § 103(a) over Lin and Takahashi, and further in view of U.S. Patent No. 6,328,413 (hereinafter "Rutland").

VII. ARGUMENT

A. Prosecution History

The present application was filed on April 15, 2004 as U.S. Patent Application Serial No. 10/825,736, and is entitled INK-JET PRINTING SYSTEM WITH REDUCED NOZZLE CLOGGING. The present application was filed as an original utility application.

In the first Office Action mailed March 27, 2006, the Examiner rejected pending claims 1-30. Specifically, Claims 1-3, 5-9, 11-18, 20-24, and 26-30 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,624,484 (hereinafter "Takahashi"); claims 4 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi in view of U.S. Patent No. 6,328,413 (hereinafter "Rutland"); and claims 10 and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi in view of U.S. Patent No. 5,764,263 (hereinafter "Lin '263"). In a reply submitted by the Appellant on June 27, 2006, the Appellant respectfully disagreed with the reasons for rejection based Takahashi. The arguments presented by the Appellant were directed to Takahashi's failure to teach each and every element of the claims, specifically an ink-jet ink including both an anionic dye colorant and from 0.05 wt% to 1.0 wt% of an anionic dispersant polymer.

In a non-final Office Action dated August 25, 2006, all of the pending claims were once again rejected. The Examiner noted that Appellant's arguments were considered but were moot in view of the new ground(s) of rejection. The new grounds of rejection were that claims 1-3, 5-9, 11-18, 20-24, and 26-30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi in view of U.S. Patent No. 4,281,999 (hereinafter "Becker"); claims 4 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi in view of Becker, and

further in view of Rutland; and claims 10 and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi in view of Becker, and further in view of Lin '263.

In a response and amendment submitted by the Appellant on November 27, 2006, claims 1 and 16 were amended to include the subject matter of claims 8 and 23 respectively. Specifically, the independent claims were amended to include "from 0.1 wt% to 6 wt% anionic dye colorant." In the same response, the Appellant respectfully disagreed with the reasons for rejection based Takahashi in view of Becker, particularly in light of the amended claims.

In response to the amendment and response submitted by the Appellant, the Examiner issued a non-final rejection on January 25, 2007. In the Office Action, the Examiner rejected claims 1-3, 5-7, 9-18, 20-22, and 24-30 were under 35 U.S.C. § 103(a) as being unpatentable over Takahashi in view of U.S. Patent No. 5,958,121 (hereinafter "Lin"); and claims 4 and 19 as being unpatentable over Takahashi and Lin, and further in view of Rutland.

In a response mailed April 25, 2007 the Appellant respectfully disagreed with the reasons for rejection based Takahashi in view of Lin. Specifically, the Appellant argued that the combination of references does not teach or suggest each and every element. Namely, the combination of Takahashi and Lin does not teach the combination of anionic dye colorant present in an ink with anionic dispersant polymer, nor does it teach the relative amounts of anionic dye colorant and anionic dispersant. The Appellant also argued that neither reference clearly teaches anionic dispersant polymer.

In response to the Appellant's response, the Examiner issued final rejection on June 20, 2007, and upheld the reasons for rejection issued in the Office Action of January 25, 2007. The Appellant responded by filing a Request for Continued Examination (RCE) on September 6,

2007. Along with the RCE, the Appellant submitted arguments in favor of patentability and respectfully disagreed with the reasons for rejection based on the combination of Takahashi and Lin.

The Examiner issued another action dated September 28, 2007 in response to the RCE, presenting new grounds for rejection. Specifically, Claims 1-3, 5-7, 9-18, 20-22, and 24-30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lin in view of Takahashi; and claims 4 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lin and Takahashi, and further in view of Rutland.

In a response submitted on December 21, 2007, Appellant submitted arguments in favor of patentability and respectfully disagreed with the reasons for rejection based on the combination of Lin and Takahashi. In response to the Appellant's response, the Examiner issued another final rejection on March 6, 2008, and upheld the reasons for rejection issued in the Office Action of September 28, 2007. The Appellant submitted a response to the final rejection on May 2, 2008, again submitting arguments in favor of patentability and respectfully disagreed with the reasons for rejection based on the combination of Lin and Takahashi.

Upon receiving an Advisory Action on June 16, 2008, noting that the request for reconsideration had been considered but did not place the application in condition for allowance, Appellant decided it would be beneficial to appeal the present claims so that a neutral third party could decide these issues. Appellant filed a Notice of Appeal on July 7, 2008.

The shortcomings of the rejections will now be reviewed. Arguments and statements by Appellant made earlier but not repeated here are also part of the record for this appeal and are not waived; although they may be modified or supplemented herein. To keep this brief short while

still trying to provide an adequate basis for review, some observations and arguments that might have been presented are not included. Accordingly, Appellant's silence herein with respect to particular statements by the United States Patent and Trademark Office does not indicate agreement with or acquiescence thereto.

B. Appellant's Invention

The present invention is directed toward a system (claim 1) and method (claim 16) for ink-jet imaging. In accordance with embodiments of the claimed invention, this system allows for reduced nozzle clogging due to cross-contamination. The claims set forth a fluid dispensing system specifically designed for ink-jet printing comprising an ink-jet ink with from 0.1 wt% to 6 wt% of an anionic dye colorant and from 0.05 wt % to 1.0 wt % of an anionic dispersant polymer. The claims also set forth a fixer composition with a cationic crashing agent that is reactive with a component of the ink-jet ink. The fluid dispensing system can be configured for overprinting or underprinting the fixer composition with respect to the ink-jet ink.

Claim 16 sets forth a method for ink-jet imaging including jetting from printing nozzles an ink-jet ink that includes from 0.1 wt% to 6 wt% of an anionic dye colorant and from 0.05 wt% to 1.0 wt% of an anionic dispersant polymer, and jetting from printing nozzles a fixer composition including a cationic crashing agent reactive with a component of the ink-jet ink. The fixer composition is either overprinted or underprinted with respect to the ink-jet ink.

For background, it should be noted that cross contamination of printing nozzles can be a significant problem in the ink-jet arts, particularly because nozzles are very small and ink-jet imaging is a very precise art. Fixer, as a general rule, tends to react or crash with inks (by design when printed on paper). However, small aerosol droplets and/or liquid migration on printheads

can cause inappropriate reaction at the nozzles, thus leading to clogging of the nozzles. Thus, the claimed invention deals with this problem.

C. The Lin Reference

The Lin reference is directed to paper curl reduction process by applying an aqueous dye or pigment ink in an image-wise fashion to one side of a substrate, and applying a clear aqueous liquid to the opposite side of the substrate. Lin teaches that a variety of chemical additives can be included in the aqueous inks and clear aqueous liquids, including surfactants, wetting agents, polymeric chemical additives to enhance the viscosity of the ink, and in the case of pigments, dispersants.

D. The Takahashi Reference

The Takahashi reference discloses a liquid composition consisting of a cationic substance of polyallylamine and glycerol. Takahashi also teaches an ink-jet ink with an anionic dye colorant. Additionally, the reference discloses the steps of overprinting and underprinting with respect to an ink. Takahashi teaches, in the context of printing with pigments, an ink-jet ink including 0.1 wt % to 5 wt % of a dispersant.

E. Rejection Under 35 U.S.C. § 103(a) over Lin in view of Takahashi (claims 1-3, 5-7, 9-18, 20-22, and 24-30)

The Examiner rejected claims 1-3, 5-7, 9-18, 20-22, and 24-30 as being allegedly unpatentable over Lin in view of Takahashi under 35 U.S.C. § 103(a). The PTO, through the Examiner, has the burden of establishing obviousness Appellant contends that the Examiner has not met its burden of establishing a *prima facie* case of obviousness for failure to teach or suggest every element of these claims in the arrangement required by the claims.

Before discussing the rejection, it is thought proper to briefly state what is required to sustain such a rejection. The issue under § 103 is whether the PTO has stated a case of *prima facie* obviousness. According to the MPEP § 2142, the Examiner has the burden and must establish a case of *prima facie* obviousness by showing the prior art reference, or references combined, teach or suggest all the claim limitations in the instant application. Further, the Examiner has to establish some motivation or suggestion to combine and/or modify the references, where the motivation must arise from the references themselves, or the knowledge generally available to one of ordinary skill in the art. And finally, the Examiner has to show a reasonable expectation of success in the prior art. Nothing in the recent KSR Supreme Court ruling fundamentally changes this basic analysis. The Appellant respectfully asserts the Examiner has not satisfied the requirement for establishing a case of *prima facie* obviousness in any of the rejections.

Recognizing that the differences between dyes and pigments may seem subtle to an untrained individual, the Appellant wishes to briefly discuss these ink components. Often times, references are directed to inks that may include pigment or dye as the coloring agent. Formulating pigment-based inks and dye-based inks pose different problems. When, for example, formulating inks for use in an ink-jet printer, the ink must be capable of moving through and ejection from the printer via customary routes, i.e. ink flow paths and printheads. Each ink must be formulated to have appropriate dispersion, homogeneity, and viscosity properties, for example, to travel through the printer. Further, the ink must be formulated to appropriately respond to the printing mechanisms of the printer, for example, heat or piezoelectric energy. Additionally, the ink must be formulated to settle on a print media and

provide an image as desired. Pigments and dyes affect overall properties of and ink in different ways, and interact with other ink components in different ways. That said, it has become customary in the art of ink design and formulation to discuss many ink components generally, and not clarify use with dye or pigment or both dye and pigment, even though the chemistry of each requires fundamentally different considerations, i.e. pigments are small dispersed particulates needing dispersing and dyes are water or solvent soluble (requiring no dispersion). As a result, one skilled in the ink-jet arts would know that dispersants are used with pigment colorants in order to facilitate their dispersion in the ink and to avoid agglomeration or clumping of the pigments. In contrast to this, separate dispersants are not thought to be used in dye based inks, as dyes are soluble in their vehicle and do not benefit from the dispersing agent acting on the colorant *per'se*. It is important to note that the anionic dispersing agents used in the systems of the present invention are not present to act on or with the unprecipitated anionic dyes present in the systems. Rather, the anionic dispersing agents are present in the system to alleviate and/or eliminate nozzle clogging in an ink-jet system when cross contamination might occur with a fixer composition. Specifically, but without being limited by theory, "it is believed that the presence of an anionic dispersant polymer in the ink-jet ink can reattach to undesired anion dye/cationic crashing agent precipitate through a combination of coulombic interactions between the anionic dispersant polymer and cationic polymer." Page 8, lines 13-16 (emphasis added). In other words, by including a dispersing agent in the ink-jet ink, nozzle clogging that might otherwise occur as a result of anionic dye/cationic crashing agent precipitation from cross-contamination can be alleviated. With this in mind, our discussion turns to the cited references.

As noted by the Examiner, the Lin reference teaches a set of inks which can include a first ink having a color and comprising water and a colorant selected from the group consisting of anionic dyes, dyes having physically or chemically associated therewith a stabilizing agent having anionic groups, pigment particles having anionic groups chemically attached thereto, pigment particles having physically or chemically associated therewith a stabilizing agent having anionic groups thereon, and mixtures thereof; and a second ink which includes a cationic ammonium functional group to immobilize the first ink. The Examiner has cited a specific portion of Lin as allegedly teaching the presence of both anionic dyes and anionic dispersing agents. Although this passage does provide a laundry list of a variety of possible stabilizers, including anionic, cationic, and non-ionic, there is no clear teaching of the use of an anionic dye of one weight percent concentration with an anionic dispersing agent with another weight percent concentration. The Examiner seems to be confusing general discussion of dispersants that are relevant to the pigment colorant to the claimed use in accordance with embodiments of the present invention. Without such a teaching, no *prima facie* case of obviousness can be established, particularly in light of the knowledge of those skilled in the art that dispersants generally are of no need in inks which utilize dye colorants.

Further, it is noted that the reference at the location cited by the Examiner discusses anionic dyes separately from dyes having physically or chemically associated stabilizing agents. In other words, the reference appears to focus on anionic dyes separately from anionic dyes with stabilizing agents associated therewith. Nowhere does the reference refer separately to an embodiment where an anionic dye is used in an ink, and further a different concentration of a dispersing agent is used, as required by the currently claimed invention.

The Examiner has combined Lin with Takahashi, where Takahashi is cited to provide an alleged teaching of overprinting and underprinting of a fixer composition. However, Appellant asserts that the present claims are also patentable over this combination of references because Takahashi fails to remedy the deficiencies of Lin described above. Specifically, Takahashi does not teach or suggest an ink-jet ink with from 0.1 wt% to 6 wt% of an anionic dye colorant and from 0.05 wt % to 1.0 wt % of an anionic dispersant polymer. Rather, like Lin, Takahashi teaches these components as alternatives, with the dispersant being used in conjunction with pigments rather than dyes. In fact, Takahashi supports the Appellant's assertion that one skilled in the art would typically not use dispersants with dyes, but rather would use dispersants with pigments. When dispersing agents are discussed in Takahashi, they are always tied directly to the use of a pigment in the ink and not to the use of an anionic dye as required by the currently pending claims. This can be seen at col. 5, lines 20-25, where Takahashi proposes the use of inks "comprising a dye containing an anionic group..., or inks comprising an anionic compound and a pigment". (emphasis added) Elsewhere in Takahashi, the ink is again described as using either an anionic dye or a pigment, and Takahashi goes on to teach that "[i]n the case where the pigment is used as a coloring material, an anionic compound is used in combination." Col. 8, lines 11-15 (emphasis added). See also col. 9, lines 35-37, lines 53-55, and lines 58-60; Column 10, lines 3-5 and lines 54-56; Column 11, lines 4-9 and lines 30-35; as well as the Examples. Nowhere does Takahashi teach the combination of anionic dye colorant and anionic dispersant polymer in an ink-jet ink as recited in claims 1 and 16. Consequently, Takahashi does not remedy the deficiencies of Lin with regard to teaching or suggesting the elements of these claims.

In light of the above, Appellant submits that claims 1 and 16 are patentable over the

combination of Lin and Takahashi, as these references fail to teach every element of these claims in the arrangement required by the claims. Instead, both of these references teach combinations or arrangements that, while indicative of the knowledge and expectations of those of ordinary skill in the art, are different from Appellant's claims. The references particularly reflect the knowledge of those skilled in the art that dispersants generally are of no need in inks which utilize dye colorants, while the present claims recite an ink in which an anionic dye colorant and an anionic dispersant reside in combination. As noted in *Schenck v Nortron Corp.*, the expectations and understanding of those in the art are relevant in evaluating obviousness. 713 F.2d 782, 785; 218 USPQ 698, 700 (Fed. Cir. 1983). Appellant submits that in view of the differences between Appellant's claims and the references and understanding of the art, the present invention as a whole would not be obvious to one skilled in the art from the teaching of the references. Therefore claims 1 and 16 are patentable over the combination of Lin and Takahashi, as these references fail to fairly teach or suggest every element of these claims in the arrangement required by the claims. Furthermore, this is also true for all of the claims depending from claims 1 and 16, in that each includes all of the limitations of the claim from which it depends. Additionally, these dependent claims are also patentable for reasons independent of their dependency on claims 1 and 16. Namely, certain dependent claims recite additional limitations that are not taught in combination by the cited references. Therefore, the Appellant respectfully submit that claims 1-3, 5-7, 9-18, 20-22, and 24-30 are allowable.

F. Rejection over Lin and Takahashi further in view of Rutland (claims 4 & 19)

In addition to the above rejection, the Examiner cited Rutland, in combination with Lin and Takahashi, to remedy the deficiency in claims 4 and 19 of a teaching of ink-jet printing

nozzles and fixer printing nozzles configured in a proximity such that, upon jetting, small amounts of fixer composition aerosol jetted from the fixer printing nozzles contact the ink-jet ink printing nozzles, thereby resulting in the ink-jet printing nozzles being susceptible to cross-contamination by the fixer composition. Not only does Rutland not remedy the missing elements of the combination of Takahashi and Lin with respect to the presence of an anionic dye and an anionic dispersing agent, Rutland also does not teach a system with all of the claim limitations required by claims 4 and 19. In fact, Rutand more likely teaches away from such a combination.

Specifically, the Examiner has cited to Column 2, line 66 to Column 3, line 28 of Rutland for support of the teaching that the ink-jet printing nozzles and fixer printing nozzles can be close enough together to be susceptible to cross-contamination. Appellant's note that such discussion is in the background section of the Rutland patent and generally teaches away from the use of ink-jet nozzles which cause cross-contamination, particularly when a "fixer" solution is present. The purpose of the invention taught in Rutland is to minimize "cross-contamination of print cartridges in an inkjet printing system due to aerosol drift by employing a bidirectional spitting scheme coupled with a configuration of the print cartridges." In other words, Rutland teaches a method and/or system for minimizing cross-contamination which involves, amongst other things, configuring the print nozzles or cartridges in such a way as to eliminate or avoid cross-contamination. Therefore, Rutland teaches away from the required elements of claims 4 and 19.

As such, even if the combination of Takahashi and Lin were to teach all of the required elements of claims 1 and 16, (see above) claims 4 and 19 could not be rendered obvious by their combination with Rutland. Stated another way, the need for specialized configuration of various nozzles is not necessary in the claimed invention if the system of the claimed invention is

implemented, because the ink compositions themselves can ameliorate clogging due to cross contamination. As such, removal of the rejections based on Rutland is respectfully requested.

G. Conclusion

In conclusion, Appellant respectfully submits that the claims on appeal set forth in the Appendix are patentably distinct from the asserted prior art reference. Particularly, the combination of Lin in view of Takahashi, and the combination of Lin in view of Takahashi further in view of Rutland fail to teach each and every element of the present claims, within the meaning of 35 U.S.C. § 103.

Since the Patent Office has not met its initial burden of establishing a *prima facie* case of obviousness, the Appellant respectfully submits that all remaining rejections are improper, and should be overturned.

Dated this 19th day of August, 2008.

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VIII. CLAIMS APPENDIX

1. (previously presented) A fluid dispensing system for ink-jet printing, comprising:

(a) an ink-jet ink including from 0.1 wt% to 6 wt% anionic dye colorant and from 0.05 wt% to 1.0 wt% of an anionic dispersant polymer, and

(b) a fixer composition including a cationic crashing agent that is reactive with a component of the ink-jet ink,

said fluid dispensing system configured for overprinting or underprinting the fixer composition with respect to the ink-jet ink.

2. (original) A fluid dispensing system as in claim 1, wherein the dispensing system further includes ink-jet ink printing nozzles for printing the ink-jet ink and fixer printing nozzles for printing the fixer composition, and wherein the anionic dispersant is present in the ink-jet ink at an amount that inhibits crashing from occurring at the ink-jet ink printing nozzles.

3. (original) A fluid dispensing system as in claim 2, wherein the ink-jet printing nozzles and the fixer printing nozzles are present on a common nozzle plate,.

4. (original) A fluid dispensing system as in claim 2, wherein the ink-jet printing nozzles and the fixer printing nozzles are configured in a proximity such that, upon jetting, small amounts of fixer composition aerosol jetted from the fixer printing nozzles contact the ink-jet ink printing nozzles, thereby resulting in the ink-jet printing nozzles being susceptible to cross-

contamination by the fixer composition.

5. (original) A fluid dispensing system as in claim 2, wherein the ink-jet printing nozzles and the fixer printing nozzles are serviced by a common wiper.

6. (original) A fluid dispensing system as in claim 2, wherein the ink-jet ink and the fixer composition are present in two separate ink-jet pens.

7. (original) A fluid dispensing system as in claim 2, wherein the ink-jet ink and the fixer composition are present in two separate reservoirs of a common ink-jet pen.

8. (canceled).

9. (original) A fluid dispensing system as in claim 1, wherein the cationic crashing agent is present in the fixer composition at from 1 wt% to 5 wt%.

10. (original) A fluid dispensing system as in claim 1, wherein the anionic dispersant polymer is a copolymer that includes both a hydrophobic group and an anionic group.

11. (original) A fluid dispensing system as in claim 1, wherein the anionic dispersant polymer has a weight average molecular weight from 4,000 Mw to 50,000 Mw.

12. (original) A fluid dispensing system as in claim 1, wherein the crashing agent is

selected from the group consisting of cationic polymers, multivalent metal ions or ionic groups, acids, and combinations thereof.

13. (original) A fluid dispensing system as in claim 12, wherein the crashing agent is a cationic polymer selected from the group consisting of polyvinylpyridines, polyalkylaminoethyl acrylates, polyalkylaminoethyl methacrylates, poly(vinyl imidazole), polyethyleneimines, polybiguanides, polyguanides, polyvinylamines, polyallylamines, polyacrylamines, polyacrylamides, polyquaternaryamines, cationic polyurathenes, aminecelluloses, polysacchride amines, and combinations thereof.

14. (original) A fluid dispensing system as in claim 12, wherein the crashing agent is a multivalent metal ion provided by a member selected from the group consisting of multivalent metal nitrate salts, EDTA salts, phosphonium halide salts, organic acid salts, chloride salts, and combinations thereof.

15. (original) A fluid dispensing system as in claim 12, wherein the crashing agent is an acid selected from the group consisting of succinic acid, glycolic acid, citric acid, nitric acid, hydrochloric acid, phosphoric acid, sulfuric acid, polyacrylic acid, acetic acid, malonic acid, maleic acid, ascorbic acid, glutaric acid, fumaric acid, tartaric acid, lactic acid, nitrous acid, boric acid, carbonic acid, carboxylic acids such as formic acid, chloroacetic acid, dichloroacetic acid, trichloroacetic acid, fluoroacetic acid, trimethylacetic acid, methoxyacetic acid, mercaptoacetic acid, propionic acid, butyric acid, valeric acid, caprioc acid, caprylic acid, capric acid, lauric acid,

myristic acid, palmitic acid, stearic acid, oleic acid, rinolic acid, rinoleic acid, cyclohexanecarboxylic acid, phenylacetic acid, benzoic acid, o-toluic acid, m-toluic acid, p-toluic acid, o-chlorobenzoic acid, m-chlorobenzoic acid, p-chlorobenzoic acid, o-bromobenzoic acid, m-bromobenzoic acid, p-bromobenzoic acid, o-nitrobenzoic acid, m-nitrobenzoic acid, p-nitrobenzoic acid, oxalic acid, adipic acid, phthalic acid, isophthalic acid, terephthalic acid, salicylic acid, p-hydrobenzoic acid, anthranilic acid, m-aminobenzoic acid, p-aminobenzoic acid, benzenesulfonic acid, methylbenzenesulfonic acid, ethylbenzenesulfonic acid, dodecylbenzenesulfonic acid, 5-sulfosalicylic acid, 1-sulfonaphthalene, hexanesulfonic acid, octanesulfonic acid, dodecanesulfonic acid, amino acids such as glycine, alanine, valine, α-aminobutyric acid, α-aminobutryic acid, α-alanine, taurine, serine, α-amino-n-caprioc acid, leucine, norleucine, phenylalanine, and combinations thereof.

16. (previously presented) A method of ink-jet imaging, comprising:

(a) jetting an ink-jet ink from ink-jet printing nozzles, said ink-jet ink including from 0.1 wt% to 6 wt% of an anionic dye colorant and from 0.05 wt% to 1.0 wt% of an anionic dispersant polymer, and

(b) jetting a fixer composition from fixer printing nozzles, wherein the fixer composition is overprinted or underprinted with respect to the ink-jet ink, said fixer composition including a cationic crashing agent reactive with a component of the ink-jet ink.

17. (original) A method as in claim 16, wherein the anionic dispersant is present in the ink-jet ink at an amount that inhibits crashing from occurring at the ink-jet ink printing nozzles.

18. (original) A method as in claim 17, wherein the ink-jet printing nozzles and the fixer printing nozzles are present on a common nozzle plate.

19. (original) A method as in claim 17, wherein the ink-jet printing nozzles and the fixer printing nozzles are configured in a proximity such that, upon jetting, the ink-jet ink printing nozzles are susceptible to contamination from small amounts of fixer composition aerosol jetted from the fixer printing nozzles.

20. (original) A method as in claim 17, wherein the ink-jet printing nozzles and the fixer printing nozzles are serviced by a common cleaning system.

21. (original) A method as in claim 16, wherein the ink-jet ink and the fixer composition are present in two separate ink-jet pens.

22. (original) A method as in claim 16, wherein the ink-jet ink and the fixer composition are present in two separate reservoirs of a common ink-jet pen.

23. (canceled).

24. (original) A method as in claim 16, wherein the cationic crashing agent is present in the fixer composition at from 1 wt% to 5 wt%.

25. (original) A method as in claim 16, wherein the anionic dispersant polymer is a copolymer that includes both a hydrophobic and an anionic group.

26. (original) A method as in claim 16, wherein the anionic dispersant polymer has a weight average molecular weight from 4,000 to 50,000 Mw.

27. (original) A method as in claim 16, wherein the crashing agent is selected from the group consisting of cationic polymers, multivalent metal ions or ionic groups, acids, and combinations thereof.

28. (original) A method as in claim 27, wherein the crashing agent is a cationic polymer selected from the group consisting of polyvinylpyridines, polyalkylaminoethyl acrylates, polyalkylaminoethyl methacrylates, poly(vinyl imidazole), polyethyleneimines, polybiguanides, polyguanides, polyvinylamines, polyallylamines, polyacrylamines, polyacrylamides, polyquaternaryamines, cationic polyurathenes, aminecelluloses, polysacchride amines, and combinations thereof.

29. (original) A method as in claim 27, wherein the crashing agent is a multivalent metal ion provided by a member selected from the group consisting of multivalent metal nitrate salts, EDTA salts, phosphonium halide salts, organic acid salts, chloride salts, and combinations thereof.

30. (original) A method as in claim 27, wherein the crashing agent is an acid selected from the group consisting of succinic acid, glycolic acid, citric acid, nitric acid, hydrochloric acid, phosphoric acid, sulfuric acid, polyacrylic acid, acetic acid, malonic acid, maleic acid, ascorbic acid, glutaric acid, fumaric acid, tartaric acid, lactic acid, nitrous acid, boric acid, carbonic acid, carboxylic acids such as formic acid, chloroacetic acid, dichloroacetic acid, trichloroacetic acid, fluoroacetic acid, trimethylacetic acid, methoxyacetic acid, mercaptoacetic acid, propionic acid, butyric acid, valeric acid, caprioc acid, caprylic acid, capric acid, lauric acid, myristic acid, palmitic acid, stearic acid, oleic acid, rinolic acid, rinoleic acid, cyclohexanecarboxylic acid, phenylacetic acid, benzoic acid, o-toluic acid, m-toluic acid, p-toluic acid, o-chlorobenzoic acid, m-chlorobenzoic acid, p-chlorobenzoic acid, o-bromobenzoic acid, m-bromobenzoic acid, p-bromobenzoic acid, o-nitrobenzoic acid, m-nitrobenzoic acid, p-nitrobenzoic acid, oxalic acid, adipic acid, phthalic acid, isophthalic acid, terephthalic acid, salicylic acid, p-hydrobenzoic acid, anthranilic acid, m-aminobenzoic acid, p-aminobenzoic acid, benzenesulfonic acid, methylbenzenesulfonic acid, ethylbenzenesulfonic acid, dodecylbenzenesulfonic acid, 5-sulfosalicylic acid, 1-sulfonaphthalene, hexanesulfonic acid, octanesulfonic acid, dodecanesulfonic acid, amino acids such as glycine, alanine, valine, α-aminobutyric acid, α-aminobutryic acid, α-alanine, taurine, serine, α-amino-n-caprioc acid, leucine, norleucine, phenylalanine, and combinations thereof.

IX. EVIDENCE APPENDIX

(None).

X. RELATED PROCEEDINGS APPENDIX

(None)